

the Office Action that he has withdrawn claims 1 – 10, 15, 17, 18, and 20 – 30 from consideration.¹

Regarding the objection to drawings:

Regarding the drawings, Applicants propose amending Figs. 15 and 16, filed with the attached Request for Approval of Drawing Changes. Applicants have amended Figs. 15 and 16 to add the legend “PRIOR ART,” required by the Examiner.

Regarding the rejection of claim 19 under 35 U.S.C. § 112, 1st ¶:

On page 3 of the Office Action, the Examiner rejected claim 19 under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Regarding the rejection of claim 19 under 35 U.S.C. § 112, 1st paragraph, Applicants dispute the Examiner’s allegations on p. 3 of the Office Action. Contrary to the Examiner’s allegations, Applicants’ specification does describe all claimed subject matter in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicants respectfully direct the Examiner to Applicants’ specification, p. 32, l. 25 through p. 33, l. 8. This portion states:

“Since the top surface of the storage node electrode is covered by the insulating film, when a capacitor insulating film is formed by the chemical-vapor deposition (CVD), the CVD film cannot be thicker on the top surface of the storage node electrode than on the side thereof. Therefore, the coverage of the

¹ The Examiner withdrew claims 1 – 9, 17, 18, and 20 on September 13, 2001; withdrew claim 19 on March 27, 2001; and withdrew claims 1 – 10, 15, 17, 18, and 20 – 30 on September 24, 2002. The Examiner reinstated claim 19 for examination on the merits in the present Office Action.

capacitor insulating film (the uniformity in thickness of the film on the side of the storage node electrode) is improved, so that the capacitor insulating film can be thinner. Thus, the capacitance can be increased.”

In light of the above-mentioned exemplary description of an embodiment of the invention contained in the specification, Applicants therefore submit that the Examiner has not met his “initial burden of presenting by a preponderance of the evidence why a person skilled in the art would not recognize in an applicant’s disclosure a description of the invention defined by the claims.” M.P.E.P. § 2163.04, pp. 2100-168 – 2100-169.

Finally, Applicants submit that, for the reasons already presented above, all subject matter in “the specification conveys with a reasonable clarity to those skilled in the art that, as of the filing date sought, applicant[s] [were] in possession of the invention as now claimed.” M.P.E.P. § 2163, p. 2100-158. Claim 19 fully complies with the requirements of 35 U.S.C. § 112, 1st paragraph, and Applicants accordingly request withdrawal of the rejection.

In making the various references to the specification set forth herein, it is to be understood that Applicants are in no way intending to limit the scope of the claims to the exemplary embodiments described in the specification. Rather, Applicants expressly affirm that they are entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

Regarding the rejection of claim 19 under 35 U.S.C. § 102(b) and Examiner’s “Response to Arguments” (Office Action, p. 4):

Applicants respectfully traverse the rejection of claim 19 under 35 U.S.C. § 102(b) as anticipated by Kashihara.

Applicants point out that in order to properly establish that Kashihara anticipates Applicants’ claimed invention under 35 U.S.C. § 102(b), each and every element of each of the claims in issue must be found, either expressly described or under principles of inherency, in that

single reference. Furthermore, “[t]he identical invention must be shown in as complete detail as is contained in the … claim.” See M.P.E.P. § 2131, p. 2100-69, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Finally, “[t]he elements must be arranged as required by the claim.” M.P.E.P. § 2131, p. 2100-69. Regarding the 35 U.S.C. § 102(b) rejection, Kashihsara does not teach each and every element of Applicants’ present invention as claimed.

Applicants’ independent claim 19 recites a combination of elements, among them: “a lower electrode formed in contact with the conductive plug and having a side and upper surface, a surface area of the side being larger than a surface area of the upper surface.”

Kashihsara is clearly different from Applicants’ independent claim 19. Unlike Applicants’ claimed invention, Kashihsara does not disclose at least these elements of Applicant’s claim 19. In contrast, Kashihsara teaches a lower electrode layer 1 formed in contact with a barrier metal layer 13 on plug layer 43a. See Kashihsara’s Figure 1. Kashihsara does not disclose anything about the lower electrode having a side and upper surface, *a surface area of the side being larger than a surface area of the upper surface*. Further, Kashihsara teaches a capacitor insulating layer 3 formed on lower electrode layer 1. Kashihsara does not disclose anything about the capacitor insulating layer 3 being formed above a top surface of the lower electrode layer 1 *via a second insulating film different from the capacitor insulating film*. Thus, Kashihsara does not disclose each and every element of Applicants’ claim 19.

It appears that the Examiner attempted to dismiss Applicants’ previous arguments concerning this point, by both omitting an analysis that includes the full recitation of the elements of Applicants’ claim 19, and by alleging that Applicants’ previous arguments were “not convincing because the limitation (a surface area being larger than a surface area of the upper surface) is not support [ed] by the specification and/or drawings” (Office Action, p. 4).

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Applicants note that the Examiner must consider all the elements of Applicants' claimed invention, in as complete detail as contained in the claim, and also must consider all elements even when contesting support in Applicants' specification. Applicants have also already established herein that the elements of Applicants' claimed invention do have full support in the specification and drawings, and furthermore have support in the presently elected embodiment. Applicants respectfully remind the Examiner that the M.P.E.P. sets forth "when evaluating the scope of a claim, every limitation in the claim must be considered. Office personnel may not dissect a claimed invention into discrete elements and then evaluate the elements in isolation. Instead, the claim as a whole must be considered. [citations omitted]." M.P.E.P. § 2106, p. 2100-9. "Office personnel must always remember to use the perspective of one of ordinary skill in the art. Claims and disclosures are not to be evaluated in a vacuum." Id. at 2100-8.

As Applicants have demonstrated herein, since Kashihara does not disclose each and every element of Applicants' independent claim 19, Kashihara does not anticipate Applicants' claimed invention. Applicants submit that the Examiner has not met the essential requirements of anticipation for a 35 U.S.C. § 102(b) rejection. Therefore, the rejection is improper and should be withdrawn.

Moreover, regarding the Examiner's allegation that Kashihara's "capacitor insulating layer (11d) being formed above a top surface of lower electrode (1) via a second insulating film (3) ... different from the capacitor insulating film..." (Office Action, p. 5), it appears that the Examiner alleged certain features are inherent in Kashihara because two different insulating films in Kashihara are composed of different materials. Regardless of whether the two films are composed of different materials, Applicants' note that this is still not one film formed *via* another, and therefore not Applicants' claimed "the capacitor insulating film being formed above

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a top surface of the lower electrode via a second insulating film different from the capacitor insulating film" (claim 19). Applicants respectfully remind the Examiner that:

“[t]o serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. *Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that is would be so recognized by persons of ordinary skill.*”

M.P.E.P. § 2131.01(III), p. 2100-70 (italics added for emphasis), quoting *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991). See also M.P.E.P. § 2112, pp. 2100-51 – 2100-52.

Applicants submit that the Examiner has provided no recourse to extrinsic evidence, let alone any evidence in Kashihara, that makes clear that “the capacitor insulating film being formed above a top surface of the lower electrode via a second insulating film” is necessarily present in Kashihara. In addition, Applicants note that “[i]nherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient” M.P.E.P. § 2112, p. 2100-51 (internal citations omitted). The Examiner has not established that any of Applicants’ claimed features are explicitly taught by Kashihara or, as a secondary consideration, that they are inherent in Kashihara, and has not presented any factual basis or technical reasoning to demonstrate as much. It is therefore improper for the Examiner to infer that Applicants’ claimed features, quoted above, necessarily flow from Kashihara.

Since Kashihara does not disclose each and every element of Applicants’ present invention, Kashihara does not anticipate independent claim 19. Therefore, Applicants respectfully submit that claim 19 is patentable over Kashihara.

Regarding dependent claim 20: "Examiners are reminded that a dependent claim is directed to a combination including everything recited in the base claim and what is recited in the dependent claim. It is this combination that must be compared with the prior art, exactly as if it were present as one independent claim." M.P.E.P. § 608.01(n)(III), p. 600-77.

Therefore, since Applicants have shown above that independent claim 19 is allowable, Applicants submit that dependent claim 20 is also allowable at least by virtue of their dependence from allowable base claim 19.

Conclusion:

In view of the foregoing, Applicants submit that the rejection of claim 19 is improper and should be withdrawn. Applicants submit that independent claims 19 is in condition for allowance as is claim 20, at least by virtue of its dependence from allowable base claim 19. A favorable action is requested.

Should the Examiner continue to dispute the patentability of the claims after consideration of this Amendment, Applicants invite the Examiner to contact Applicants' representatives by telephone to discuss any remaining issues.

Please grant any extensions of time under 37 C.F.R. § 1.136 required in entering this response. If there are any fees due under 37 C.F.R. § 1.16 or 1.17, which are not enclosed, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our deposit account 06-0916.

Respectfully submitted,

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